

What is claimed is:

1. A method of fabricating an optical aperture:

wherein a face of a pushing body is made to be opposed to an object for aperture formation comprising a tip in a conical or a pyramidal shape formed at a substrate, a stopper arranged at a vicinity of the tip and a optical shielding film formed at least above the tip to cover at least a portion of the stopper and the tip; and

wherein an optical aperture is formed at a front end of the tip by pushing the pushing body to the object for aperture formation by a force having a component directed to the tip.

2. A method of fabricating an optical aperture, wherein a pushing body having a stopper projected in a direction of an object for aperture formation is made to be opposed to the object for aperture formation comprising a tip of a conical or a pyramidal shape and a optical shielding film formed at least on the tip; and

wherein an optical aperture is formed at a front end of the tip by displacing the pushing body by exerting a force having a component directed to the tip thereto.

3. The method of fabricating an optical aperture according to claim 1, wherein a plurality of the tips are formed and optical apertures are formed in one operation at front ends of the plurality of tips.

4. The method of fabricating an optical aperture according

to claim 1, wherein the stopper is provided with a function of controlling a displacement of the pushing body.

5. The method of fabricating an optical aperture according to any one of claim 1, wherein the pushing body is softer than a material of the tip.

6. The method of fabricating an optical aperture according to claim 1, wherein a portion of the pushing body brought into contact with the tip and the stopper constitutes a substantially flat face.

7. The method of fabricating an optical aperture according to claim 1, wherein the force is operated to a portion of the pushing body disposed substantially on an upper side of the front of the tip.

8. The method of fabricating an optical aperture according to claim 1, wherein the pushing body comprises an optically transparent material.

9. The method of fabricating an optical aperture according to claim 3, wherein a plurality of the pushing bodies are provided on a soft structure member.

10. The method of fabricating an optical aperture according to claim 1, wherein a projection is formed at a face of the pushing body opposed to the tip.

11. The method of fabricating an optical aperture according to claim 1, wherein the pushing body is softer than the optical shielding film.

12. The method of fabricating an optical aperture according to claim 1, wherein a height of the tip and a height of the stopper are substantially equal to each other.

13. The method of fabricating an optical aperture according to claim 1, wherein a difference is produced between the height of the tip and the height of the stopper.

14. The method of fabricating an optical aperture according to claim 1, wherein the difference between the height of the tip and the height of the stopper is formed to constitute a desired distribution.

15. The method of fabricating an optical aperture according to claim 14, wherein the distribution is a distribution in accordance with a shape of the substrate.

16. The method of fabricating an optical aperture according to claim 1, wherein a shape of the pushing body is a shape in correspondence with a shape of the substrate.

17. The method of fabricating an optical aperture according to claim 1, wherein a plurality of the tips are formed and when the aperture is formed at one of the tips, the tips at a surrounding thereof function as the stoppers.

18. The method of fabricating an optical aperture according to claim 17, wherein the aperture is formed at least one of the tips functioning as the stoppers.

19. The method of fabricating an optical aperture

according to claim 1, wherein the stoppers are projected portion regularly arranged around the tips and the optical shielding film is formed at least above the projected portions.

20. The method of fabricating an optical aperture according to claim 1, wherein very small structural members arranged at periodic intervals are provided at a vicinity of the tip.

21. The method of fabricating an optical aperture according to claim 20, wherein the stopper includes the periodic very small structural members.

22. The method of fabricating an optical aperture according to claim 20, wherein the periodic very small structural members are fabricated between the stopper and the tip.

23. A method of fabricating a probe for a near field light device, said method comprising:

a step of fabricating a tip for transmitting light having a desired wavelength on a substrate;

a step of fabricating a stopper arranged at a surrounding of the tip;

a step of forming a optical shielding film covering the tip; and

a step of forming an optical aperture at a front end of the tip by exerting a force simultaneously to the tip and the stopper by using a pushing body having a substantially flat

face.

24. The method of fabricating a probe for a near field light device according to claim 23, wherein the substrate is cut and a plurality of the tips are separated after forming the optical apertures at the front ends of the tips.